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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,788	09/28/2001	Thomas Bartz	IN-12093	5467

7590 07/24/2003

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EXAMINER

BISSETT, MELANIE D

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 07/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/937,788	BARTZ ET AL.
	Examiner	Art Unit
	Melanie D. Bissett	1711

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 02 June 2003.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-5 and 7-10 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,2,4,5,7,8 and 10 is/are rejected.

7) Claim(s) 3 and 9 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)                    4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                    5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ .                    6) Other: \_\_\_\_\_

1. The rejections based on 35 USC 112 and 103 have been withdrawn based on the applicant's amendments. Upon reconsideration, however, a new rejection based on 35 USC 102 has been presented.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 4, 7-8, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Kennedy.

4. Kennedy discloses a composite structure having two outer metal layers and an intermediate elastomer core layer, where the core layer has a modulus of elasticity greater than 250 MPa, tensile and compressive strengths greater than 20 MPa, and an adhesion of at least 3 MPa (abstract). Preferably, the elastomer has a modulus of elasticity greater than 275 MPa (col. 3 lines 56-63), an elongation greater than 50% (col. 4 lines 12-15), and an adhesion to the metal layers of at least 6 MPa (col. 4 lines 26-30). Figure 3 shows a structure having two outer metal layers of 10-mm thickness and a core polyurethane layer of 50-mm thickness. Polyurethanes of the invention are made by reacting an isocyanate with a polyether or polyester polyol, thus teaching

reaction products of polyether polyols with isocyanates. The reference teaches a method of fabricating the composites by casting or injecting the elastomer into a closed cavity formed between the two outer metal layers (col. 5 lines 17-21). Thus, the reference teaches a process of preparing polyisocyanate polyaddition products between two metal layers.

5. Regarding the applicant's limitation that the elastomer material is in the presence of 0.1-50% by volume of at least one gas, it is noted that Kennedy mentions the presence of voids in amounts of up to 10-20% (col. 2 lines 47-56). This may be intentional or the result of manufacturing. Because no gas is mentioned in the production method, it is the examiner's position that voids formed would consist of air. It is the examiner's position that the voids specified in the Kennedy passage would be voids between the metal walls and elastomer material (unfilled space) or large, irregular trapped air bubbles. Assuming support from the present specification to be pointed out by the applicant, limitations of the elastomer material to a "foam" material combined with a limitation to suggest uniform or homogenous cellular structure in the elastomer layer could overcome the prior art. As the claims stand, it is the examiner's position that Kennedy's mention of up to 10-20% void spaces anticipates the claims.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy.
8. Kennedy applies as above, failing to teach the requirement of fillers in a specified range. However, the reference does indicate that fillers may be included in the elastomer layer to reduce the thermal coefficient and reduce cost of the layer (col. 4 lines 39-46). Therefore, it is the examiner's position that it would have been *prima facie* obvious to include fillers in any amount necessary to reduce the thermal coefficient and the cost of the elastomer layer.

#### ***Allowable Subject Matter***

9. Claims 3 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. The following is a statement of reasons for the indication of allowable subject matter:
  11. The closest prior art, Kennedy, discloses composite structural laminates having the applicant's claimed general layer structure and thicknesses. Kennedy teaches that void spaces may be intentionally formed in the composite structure. It is the examiner's position to interpret this language as teaching forming voids within the cavity but not for forming a uniform, cellular foam. The reference specifies compact, i.e. unfoamed structures. Therefore, it is the examiner's position that the addition of a material which would stabilize a foam would go against the concept of the reference. Also, Kennedy

does not specify the polyether polyols used in the invention. It is the examiner's position that the use of foam stabilizers or the use of the applicant's specified polyether polyols in the claims composite structure would provide a novel, unobvious step over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb  
July 18, 2003



James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700